



Australian Government

CUAANM512 Create 3D digital environments

Release: 1

CUAANM512 Create 3D digital environments

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 5.0.

Application

This unit describes the skills and knowledge required to create 3D digital environments using appropriate software, reference material and established designs.

The unit applies to those who follow technical and design specifications to produce 3D environments to scale. As members of a production team they must consider how later production stages rely on, and therefore influence, the creation of their work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Visual communication – Animation and digital effects

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Clarify work requirements	1.1 Determine requirements and purpose for 3D digital environments with reference to production documentation 1.2 Identify workflow sequences and production deadlines in consultation with required personnel 1.3 Select software that best suits the type of production and delivery platform for which 3D digital environments are being created 1.4 Gather and analyse reference materials for visualisation of 3D environments
2. Create 3D digital environments	2.1 Build a previsualisation of environments in relation to reference materials using software features, and submit to required personnel for approval 2.2 Build realistically detailed environment models and progressively

ELEMENT	PERFORMANCE CRITERIA
	refine them until they meet design requirements 2.3 Check integrity of models and ensure spatial relationship meets design requirements 2.4 Apply texture coordinates according to design requirements 2.5 Create and incorporate matte paintings according to design requirements 2.6 Apply lighting and shaders according to design requirements 2.7 Experiment with different lighting rigs and select a rig that meets design requirements 2.8 Adopt safe ergonomic practices when using screens and keyboards for extended periods of time 2.9 Continuously refine all aspects of 3D digital environments until required creative effect is achieved 2.10 Submit environments to required personnel for feedback on whether production requirements have been met and make final adjustments as required
3. Finalise projects	3.1 Render and output environments and submit to required personnel by agreed deadlines 3.2 Make back-up copies of files, and save and store animations using appropriate output file formats and standard naming conventions 3.3 Participate in project evaluations and contribute ideas and suggestions about ways to improve future projects

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Oral communication	• Uses clear language to explain and discuss task requirements • Confirms understanding using questioning and listening techniques
Reading	• Interprets and analyses textual information from different sources for idea development and confirmation of job parameters
Planning and organising	• Plans and manages workflow processes to ensure design and production requirements are satisfied • Documents task requirements and workflow sequences
Self-management	• Follows organisational procedures when managing files and directories • Adheres to work health and safety requirements

SKILL	DESCRIPTION
Teamwork	• Uses appropriate communication practices and protocols to present drafts • Refines ideas and discusses project outcomes in collaboration with others
Technology	• Uses digital tools to develop refined, technically accurate 3D digital environments for different productions and delivery platforms using digital tools

Unit Mapping Information

Supersedes and is equivalent to CUAANM502 Create 3D digital environments.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUAANM512 Create 3D digital environments

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- create detailed 3D digital environments that meet design requirements and production deadlines for at least two different productions.

In the course of the above, the candidate must:

- apply a range of modelling techniques to achieve creative and realistic effects
- select and proficiently use required animation software to achieve product outcomes
- store 3D environments in required file formats using industry naming conventions
- participate productively in project evaluation for improvement
- adopt safe ergonomic practices when using screens and keyboards for extended periods of time
- work collaboratively with others in a production team to achieve project outcomes.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- strategies to address typical challenges when creating digital environments
- digital modelling techniques used in development of 3D environments
- the realistic construction of 3D environments using spatial relationship elements including scale, form, weight and volume
- strategies to evaluate projects to improve future projects
- concept of integrity in modelling 3D environments
- different 3D animation software
- following concepts and their application to developing 3D environments:
 - texture coordinates
 - matte paintings
 - lighting and shaders

- required file formations and industry naming conventions
- work health and safety requirements relating to working with computers and keyboards for extended periods of time.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- production documentation
- interaction with others required to demonstrate the performance evidence
- animation software.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

Links

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